INDEX search, volume 1, 1970

ANZAAS
Chairman elected 6
Congress, Brisbane 317
Congress, Port Moresby 173
Convocation, August 1970 98
Council 99
Junior Lectures in WA 52
Reorganization 2, 3
Symposium on Noise Pollution 7, 165
Aboriginal Camp Fire, Pleistocene from Lake Yantara, NSW 73
Agriculture in the New Guinea Highlands, History 199
Aircraft Landing Measurement System 319
Alexander, A.E. (Obituary) 91
Allen, E. 44
Allocation to Extend Skill of Worker 74
Alpers, M. (*See* Morris)
Anatexis, Rock Weathering and Ore Deposits 111
Anderson, C.A. (*See* Segnit)
Andrews, C.L. — Science Teaching and Ethnoscience 302
Anion Binding at Oxide Surfaces 324
Anomalous Water 332
Artesian Basin, Palaeoecology and Palaeogeography during the Cretaceous 125
Arthropods in Soil 41, 75
Arunta Complex Metamorphic Rocks — Orogenic Break 159
Astronomy 9, 166
Atkinson, M.R. (Obituary) 50
Australian Academy of Science
Council Elected 7
Fellows Elected 8
Australian Biochemical Society Lecture 60
Australian Computer Society 45, 94
Australian Conservation Foundation 52, 319
Australian Entomological Society's Awards 53
Australian Institute of Food Science and Technology Award 322
Australian Institute of Marine Science Interim Council 52
Australian Institute of Physics Honorary Fellows 94
Australian Mechanical Engineering Prize 322
Automation, Education and Training 55

Balance of Trade, Comparative Advantage and Development Priorities 272
Barber, H.N. 53
Barlin, L.M. — Wildlife Conservation 84
Barnes, J.H. 44
Batchelor, G.K. 94
Bats (Chiroptera) of New Guinea, Geographical Relationships 244
Beaton, C.D. (*See* Taylor)
Bladin, P.F. 94
Bone Pigmentation in Australian Frogs 75
Bonnyman, J. — Concentrations of Caesium-137 in Rainwater and Milk in Australia during 1969 160
Book Reviews 46, 85, 131, 167, 352, 356 (*See also* Publications Received)
Adams, Baker and Allen — The Study of Botany 167
Agranoff *et al.* — Progress in Molecular and Subcellular Biology 358
Ambartsumyan — Theory of Anisotropic Plates 357
Andrewes — Lives of Wasps and Bees 169
Asimov — Photosynthesis 168
Australian Mineral Industry 361
Badger — Captain Cook 86
Baker and Allen — Process of Biology 359
Bartels — Prenatal Respiration 361
Benarde — Disinfection 361
Blackburn — Spectral Analysis 357
Britain 1970 170
Burbidge — Australian Grasses 170
Burbidge and Gray — Flora of the ACT 167
Burman — Analogues of Mucleic Acid Components 170
Burstein and Lundqvist — Tunnelling Phenomena in Solids 168
Byron and Fuller — Mathematics for Classical and Quantum Physics 46
Cantore — Atomic Order 360
Carpenter — Vacuum Technology 172
Codlin — Cryogenics and Refrigeration 131
Cornsweet — Visual Perception 357
Cutler — Anatomy of the Monocotyledons 87
de Keyser and Lucas — Geology of the Hodgkinson and Laura Basins, N. Qld. 363
Dobzhansky *et al.* — Evolutionary Biology 358
Doremus — Semiconductor Effects in Amorphous Solids 87
Ebert and Howard — Current Topics in Radiation Research 48
Efron — Psychotomimetic Drugs 364
Eik-nes — Androgens of the Testis 172
Eisenberg and Greiner — Excitation Mechanisms of the Nucleus 132
Elliott — Shape of Intelligence 360
Eyring and O'Keefe — Chemistry of Extended Defects in Non-metallic Solids 360
Fenyo and Frey — Modern Mathematical Methods in Technology 47
Flaschka *et al.* — Quantitative Analytical Chemistry 358
Foster — Automatic Syntactic Analysis 48
Gimblett and Hodd — Inorganic Macromolecules Reviews 356
Goldfinger — Clean Surfaces 362
Hales — Vegetable Staticks 47
Hammer — Advances in Mathematical Systems Theory 85
Hartog — Sea-grasses of the World 171
Hartshorne and Stuart — Practical Optical Crystallography 86
Heinemann — Catalysis Reviews 85
Heinmets — Concepts and Models of Biomathematics 85
Henderson — Cloud and Bubble Chambers 132
Holgate — Antarctic Ecology 48
Hopgood — Compiling Techniques 88
Houwink — Data: Mirrors of Science 131
Konopinski — Classical Descriptions of Motion 358
Kovalenko — Thermoelasticity 359
Krampitz — Thiamin Diphosphate and Its Catalytic Functions 361
Lanczos — Space Through the Ages 131
Langton — Rocket Propulsion 170
Lapostolle and Septier — Linear Accelerators 167
Lazarides — Grasses of Central Australia 169
McCoy — Chemical Analysis of Industrial Water 86
McDaniel and McDowell — Case Studies in Atomic Collision Physics 87
McDowell and Coleman — Introduction to Theory of Ionatom Collisions 362
McKee and Rolph — Three Body Problem in Nuclear and Particle Physics 171
Maitland and Dunn — Laser Physics 363
Mohat — Elementary Functions 358
Mott — Amorphous and Liquid Semiconductors 131
Nass — Molecules of Life 357
Passow and Stampfli — Laboratory Techniques in Membrane Biophysics 47
Paterson — Introduction to Ion Exchange 363
Pitts and Metcalf — Advances in Environmental Sciences and Technology 172
Porter — Gas Chromatography in Biology and Medicine 356
Pritchard — Poly(Vinyl Alcohol) 357

Ringwood and Green — Phase Transformations and the Earth's Interior 168
Schaffer — The National Science Foundation 354 (Essay Review)
Seeger *et al.* — Vacancies and Interstitials in Metals 356
Siebahn *et al.* — ESCA Applied to Free Molecules 363
Spencer — Guide to Basic Programming 88
Spirin and Gavrilova — The Ribosome 47
Sprackling — Mechanical Properties of Matter 47
Stacey — Physics of the Earth 46
Stretton — Political Sciences 352 (Essay Review)
Thermochimica Acta 364
Wegener — Nonequilibrium Flows 132
Weinstein and Lande — Peptides: Chemistry and Biochemistry 362
Weyl — Oceanography 131
Wilkinson — Isopin in Nuclear Physics 87
Williams — South Australia from the Air 362
Willis — Handbook to Plants in Victoria 171
ZAK — Irreducible Representations of Space Groups 132
Boughton, C.R. — Clinical Observations on Immunity in Leprosy 256
Branagan, D.F. *et al.* — The Carboniferous Sequence at Glenbawn NSW 126
Bridges-Maxwell, C.W. — Science and Politics 145
Brown, H.L. 44
Bursaries 44
Burton, J.R. 53

Caesium-137 Concentrations in Rainwater and Milk in Australia 160
Capital Allocation in Less Developed Economies 268
Carboniferous Sequence at Glenbawn NSW 126
Carettochelys insculpta 41
Carey, S.W. — Australia, New Guinea and Melanesia in the Current Revolution in Concepts of the Evolution of the Earth 178
Casey, Lord 44
Chemistry in Developing Countries 207
Churchill Fellowship 323
Clarke, R.H. and Priestley, C.H.B. — Asymmetry of Australian Desert Sand Ridges 77
Cochliobolus sativus Causing a Leaf Blight Disease of Ryegrass (*Lolium* spp.) 79
Cogger, H.G. — First Record of Pitted-Shelled Turtle from Australia 41
Colo River Terraces, NSW 164
Comment 54, 96
Communication Problem; Social Responsibility in Science 120
Computers 156
Australian University Applications 9
Library Applications 9
Radio and TV Lectures 95
Conferences and Meetings 8, 45, 53, 95, 158, 165, 321, 323
Conodonts, Triassic, in WA 159
Conroy, J.D. and Stent, W.R. — Education, Employment and Migration (in New Guinea) 306
Conservation: a Need for New Strategies 96
Conservation, Ecology and Politics 147
Conservation of Wildlife 84
Cooper, M.K. 44
Coulter, E.M. — The Sky Month by Month 166
Crawford, Sir John — Report of ANZAAS Committee of Review 3
Crook, K.A.W. — Social Responsibility in Science: The Problem of Communication 120
Crotty, T.M. — History of Road Development in the Territory of Papua and New Guinea 239
Cullen, C.J. 44
Culvenor, C.C.J. — Toxic Plants: a Re-evaluation 103
Cybernetics, International Association 9

Daley, M — Remote Sensing (ERTS) 10
Davenport, J.B. 7
Davis, E.A. — Semiconductors without Form 152
Davis, F.J. 44
Davis, M.C. 44
Desert Sand Ridges, Asymmetry 77
Dilophospora alopecuri in Australia 83
Debson, A.J. (*See* Rennie)
Drepanotermes in a Mulga Ecosystem 43, 88
Dubout, P. — The Sky Month by Month 166
Duggleby, J.C. (*See* Bonnyman)
Dunn, I.P. — The Sky Month by Month 166
Dunphy, D.C. and Ford, G.W. — Implications of Automation for Education and Training 55
Duricrust on South Coast of NSW, Probable Post-uplift Age 163
Dury, G.H. and Langford-Smith, T. — Pleistocene Aboriginal Camp Fire from Lake Yantara, NSW 73

Earth Resources Technology Satellites (ERTS) 10
Earth's Evolution, Australia, New Guinea and Melanesia in Current Concepts 178
Ecology, Conservation, and Politics 147
Economic Development 263
Economic Efficiency in Production from Plantation Tree Crops 277
Economics before Politics (in New Guinea) 311
Editorials 1, 49, 89, 173, 191, 206, 262, 297
Education
Implications of Automation 55
Industry's Needs 64
In the Philippines 298
Place of Science 28, 88
Relation to Employment and Migration in New Guinea 306
Eggen, O.J. — Universities and Research 166
Electronics Industry and Science Policy 142
Ellis, W.F. 44
Emmery, P. — Increasing Economic Efficiency in Production from Plantation Tree Crops 277
Employment and Migration, Relation to Education in New Guinea 306
Encel, S. — Science, Technology and the Australian Community 12
English, P.B. 44
Enzyme Mechanisms 34
Ethnoscience and Science Teaching 302
Evans, D.C. 94

Facer, R.A. — Magnetic Properties of the Giles Complex, Central Australia 76
Falk, J.E. (Obituary) 318
Farming History, Appeal for Information 157
Farrer, K.T.H. and Searby, M.H. — Science Education: Industrial Viewpoint 64
Fensham, P.J. — Place of Science in Australian Education 28, 88
Fertiliser and Pesticides, Problems in Use 341
Films
Freightliner in Action 8
London's Victoria Line 8
Fisher, D. (*See* Leitch)
Fisher, N.H. — Rock Weathering, Anatexis and Ore Deposits 111
Ford, G.W. (*See* Dunphy)
Frog Fauna, Pattern of Distribution and Origins in New Guinea 246
Frogs, Australian, Bone Pigmentation 75
Fungal Parasite, Systemic, of *Phalaris tuberosa* 81, 166

Garnaut, R. — Balance of Trade, Comparative Advantage and Development Priorities 272
Garward, S.H. 44
Gay, F.J. (*See* Watson)
Geomorphology and Late Cainozoic Uplift in Southeastern Papua 222
Giblin Memorial Lecture — Economic Development 263
Glenbawn NSW, Carboniferous Sequence 126
Golson, J. — Foundations for New Guinea Nationhood (Anthropology) 192
Growth under Central Planning 270

Haantjens, H.A. — New Guinea Soils: their Formation, Nature and Distribution (Engineering) 233
Haemagglutination Variation in Poultry Flock, Genetic Analysis 79
Hail Control in Russia 92
Hannan, E.J. 8
Hasluck, Sir Paul — Opening Address ANZAAS 1970 Congress 175
Henshaw, D.E. 44
Hill, S.C. — Moral Responsibilities and Scientists 328
Hingston, F.J. *et al.* — Anion Binding at Oxide Surfaces: the Adsorption Envelope 324
Hogan, J. 44
Hogan, W. — Capital Allocation in Less Developed Economies 268
Holman, Mollie E. 8
Horwood, D. — Polyunsaturated Beef 54
Horwood, D.W. — Plain English 166
Hutchinson, K.J. and King, K.L. — Sheep Numbers and Soil Arthropods 41
Hylid Frog Fauna, Patterns of Distribution and Origins in New Guinea 246

Industry, Innovations 18
Infrared Spectra Identification Service 156
Insect Systematics and the Scanning Electron Miscroscope 347
Insect Taxonomy, Australian 69
Intersearch Graduate Program on Drugs 157

Jaeger, J.C. 53
James, B.R. 44
Jervis Bay Nuclear Power Station Agreement 156
Jones, J.B. (*See* Segnit)
Jordan, D.O. 8

Kastler, A. 7
Kettle, D.S. — Contribution Zoology can make to Developing Countries 213
Key, K.H.L. — Present Status of Australian Insect Taxonomy 69
Kimball, M.E. and Magno, M.S. — Science Education in the Philippines 298
King, L. (*See* Hutchinson)
Kitto, Sir Frank 323
Knight, A.W. 44
Knox, K.W. 6

Lambert, B.P. 44
Lang, K.C. 94
Langford-Smith. T. (*See* Dury)
Langridge, J.B. 53
Languages, Lexicostatistical Grouping 198
Late Cainozoic Uplift and Geomorphology in Southeastern Papua 222
Laughlin, R. 44
Lazenby, A. 94
Leaf Blight of Ryegrass Caused by *Cochliobolus sativus* 79
Le Fevre, R.J.W. 44
Leitch, E.C. *et al.* — A Suggested Orogenic Break within the Metamorphic Rocks of the Arunta Complex, Central Australia 159
Lemberg, M.R. 158
Leprosy, Clinical Observations on Immunity 256
Leprosy, Influence of Attitudes on Epidemiology and Control 254
Letters to the Editor 85, 130, 166, 321
Leukocyte Antigens in New Guinea 259
Liversidge Lecture — Chemistry in Developing Countries 207
Lobsters, *Panulirus* spp. of Papua and New Guinea 248
Lumley, J.M. 322
Lusby, M.M. — Science Policy towards the Electronics Industry 142

McDonell, G.J. — Transport Innovation and Social Change 275
McKean, J.L. — Geographical Relationships of New Guinean Bats (Chiroptera) 244
McPhee, C.P. — Genetic Analysis of Haemagglutination Variation in an Australorp Poultry Flock 79
McTavish, R.A. — Triassic Conodonts in WA 159
Maddocks, I. — Science in Emergent Countries (ANZAAS congress in Port Moresby) 173
Magnetic Properties of the Giles Complex 76
Magno, M.S. (*See* Kimball)
Mair, K. and Pescott, R.T.M. — Missing Stylidium Specimens 84
Malynicz, G.L. — Pig Keeping by the Subsistence Agriculturalists of the New Guinea Highlands 201
Mansfield, W.W. — A History of Anomalous Water 332
Mason, D.R. (*See* Leitch)
Mason, P. — Science and Politics 139
Mayne, S.J. *et al.* — Revised Stratigraphy of Part of the Sydney Basin 130
Meat, Polyunsaturated 54
Medallists 44, 51
Miller, J.F.A.P. 8, 53
Molina-Ramos, J. (*See* Bonnyman)
Moral Responsibilities and Scientists 328
Morris P.J. *et al.* — Leukocyte Antigens in New Guinea, 259
Murray, G.M. and Smith, A.M. — *Cochliobolus sativus* Causing a Leaf Blight Disease of Ryegrass (*Lolium* Spp.) in NSW 79

Natural Philosophy 336
New Guinea, Foundations for Nationhood 192
News 7, 52, 92, 156, 319
Nicholas, E. (*See* Mayne)
Ninham, B.W. 44
Norris, J.M. — Use of Allocation Procedures to Extend the Expertise of a Skilled Worker 74
Nuclear Power Station 156
Nuclear Science Fellowships 319
Nuclear Technology Course 95
Nuffield Foundation
Australian Advisory Committee 53
Bursaries 44

Ogston, A.G. 59, 166
Ogston, A.G. — Open-ended Tale 60
Oil and Spice Industry in TPNG 279
O'Neil, W.M. — Universities and Research 24, 166
Opal Morphology 349
Oram, N.D. — The Development of Port Moresby, What and Whose are the Problems? 282
Ore Deposits, Meetings on Genesis 320
Ore Deposits due to Rock Weathering and Anatexis 111
Ozimic, S. (*See* Mayne)

Palaeoecology and Palaeogeography of the Great Artesian Basin during the Cretaceous 125
Panulirus spp. of Papua and New Guinea 248
Papua and New Guinea Congress 173
Parbery, D.G. — *Dilophospora alopecuri* in Australia 83
Parker, R.S. — Economics before Politics: a Colonial Phantasy 311
Parker, S.G.J. 44
Paterson, I.C. (*See* Bonnyman)
Pearson, C. 44
People and Events 44, 53, 94, 158, 322
Peres, L. — Ecology, Conservation and Politics 147
Pescott, R.T.M. (*See* Mair)
Pesticides and Fertiliser, Problems in Use 341
Philip, J.R. — Some Reflexions on Natural Philosophy 336
Physical Biochemistry 60
Pig Keeping in the New Guinea Highlands 201
Plantation Tree Crops, Increasing Efficiency in Production 277
Politics and Science 139, 145
Politics, Ecology and Conservation 147
Port Moresby, Problems of Development 282
Posner, A.M. (*See* Hingston)
Powell, J.M. — The History of Agriculture in the New Guinea Highlands 199
Price, M.J. — The Development of an Essential Oil and Spice Industry in Papua and New Guinea 279
Priestley, C.H.B. (*See* Clarke)
Publications Received
(*See also* Book Reviews)
ASTM Standards 52
Art Journal 10

Astronomical Insights 319
Atomic Absorption Spectroscopy Standard 93
Chemical and Biological Weapons; the Supreme Folly 172
Communication 364
Conservation Directory 319
Contemporary Science Paperbacks 86
Elements of Classical and Statistical Thermodynamics 364
Essays in Physics 364
Flammability Standard 8
International Journal of Parasitology 92
International System of Units 157
Mass Spectra Index 52
Mathematics for Engineers and Scientists 364
Modern Physical Theory 364
Nobel Conference Lectures on Communication 364
Proteins from Waste Starch 321
Science and Society 48
Science News Yearbook 1969/70 87
Standards for Writing Dates 320
Unesco Program: Man and Biosphere 320
Pyne, R.R. — Tropical Spiny Lobsters, *Panulirus* spp. of Papua and New Guinea 248

Quaternary Sediments 130
Queen's Birthday Honours 44, 94
Quirk, J.P. (*See* Hingston)

Rabbit Fleas 84
Radioisotope Course 95
Rennie, B.C. and Dobson, A.J. — Lexicostatistical Grouping of Languages 198
Research Communications 41, 73, 125, 159, 347
Rivett Memorial Lecture 34
Road Development in Papua and New Guinea 239
Robertson, H.S. 44
Robertson, R.N. 7, 51
Rose, G. — Quaternary Sediments 130
Rowell, A.G. 44
Roxas, S.K. — Economic Development: A Conspiracy 263
Royal Society of London
Bursaries 44
Fellows 53
Royal Society of NSW, Medallists 44
Royal Society of SA Research Awards 44
Rutherford Scholarship 322

Scanning Electron Microscope and Insect Systematics 347
Scanning Microscope Study of Opal Morphology 349
Scheibnerová, V. — Some Notes on Palaeoecology and Palaeogeography of the Great Artesian Basin during the Cretaceous 125
Science and Politics 139, 145
Science Education in the Philippines 298
Science in Education 28, 64
Science Policy, National 134
Science Policy towards the Electronics Industry 142
Science Teaching and Ethnoscience 302
Science, Technology and the Australian Community 12
Scientists and Moral Responsibilities 328
Searby, M.H. (*See* Farrer)
Search
Editor 7
Policy 1
Segnit, E.R. *et al.* — A Scanning Microscope Study of the Morphology of Opal 349
Semiconductors without Form 152
Simons, M. (*See* Morris)
Smith, A.M. (*See* Murray)
Smith, I.E. — Late Cainozoic Uplift and Geomorphology in Southeastern Papua 222
Social Responsibility in Science Meeting 321
Social Responsibility in Science: The Problem of Communication 120
Soils of New Guinea: Formation and Nature 233
Spielrein, R. 322
Stent, W.R. (*See* Conroy)
Stuckey, D.S. 94
Stylidium Specimens Missing 84
Subey, W.R. — Rabbit Fleas 84
Sutherland, K.L. — Chemistry in Developing Countries: Necessity or Triviality? 207
Swinbank, W.C. 8
Sydney Basin, Revised Stratigraphy 130

Tanton, M.T. — Some Problems Associated with the Use of Fertiliser and Pesticides in Agriculture 341
Taylor, I.S. 323
Taylor, R.W. and Beaton, C.D. — Insect Systematics and the Scanning Electron Microscope 347
Teakle, L.J.H. 44
Termites, Grass-Eating, in a Mulga Ecosystem 43
Terraces of the Lower Colo River, NSW 164
Ting, A. (*See* Morris)
Torrance, R.W. 44
Toxic Plants — a Re-evaluation 103
Transport Innovation and Social Change 275
Turtle, Pitted-Shelled 41
Tyler, M.J. — Occurence of Bone Pigmentation in Australian Frogs 75
Tyler, M.J. — Patterns of Distribution and Origins of Papuan Hylid Frog Fauna 246

Underwood, E.J. 53
Universities and Research 24, 166
University of New England
Chancellor Elected 323
Vice-Chancellor Appointed 94
University of New South Wales Department of Applied Physics 157
Urban Planning and Housing in Developing Countries 289

Vegetation Changes of the Montane Tropics 217
Vincin, D.R. — Attitudes to Leprosy: Influence on Epidemiology and Control 254

Walker, D. — The Changing Vegetation of the Montane Tropics 217
Walker, D. — Conservation: A Need for New Strategies 96
Walker, J. - Systemic Fungal Parasite of *Phalaris tuberosa* in Australia 81, 166
Walkom, A.B. 51
Walsh, R.J. 44
Watertight Rocket 93
Watson, J.A.L. and Gay, F.J. — Role of Grass-Eating Termites in the Degradation of a Mulga Ecosystem 43
Weathering, Anatexis and Ore Deposits 111
Webb, T.L. and Welch, C.T. — Planning and Providing Housing for Urban Communities in Developing Countries 289
Webster, H.C. 94
Weickhardt, L.W. — Innovation in Industry 18
Westheimer, F.H. — Chemical Methods for Determining the Mechanisms of Enzyme Action 34
White, Sir Frederick 6, 94
White, G.K. 8
Whitlam, E.G. — A National Science Policy 134
Whitley, G.P. 44
Wilczynski, J. — From Extensive to Intensive Growth under Central Planning 270
Wild, J.P. 53
Wildlife Conservation, Select Committee 84
Wood, T.G. — Micro-arthropods from Soils of the Arid Zone in Southern Australia 75
Woodyer, K.D. — Terraces of the Lower Colo River, NSW 164
Wool Research Committee 322

Young, R.W. — Probable Post-uplift Age for the Duricrust on South Coast of NSW 163

Zoology's Contribution to Developing Countries 213